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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,467	12/04/2003	Joerg Ulrich Fontius	P03,0554	7491

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SCHIFF HARDIN & WAITE  
Patent Department  
6600 Sears Tower  
233 South Wacker Drive  
Chicago, IL 60606

EXAMINER
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RAHMJOO, MANUCHER

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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01/08/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/727,467

Applicant(s)

FONTIUS, JOERG ULRICH

Examiner

Mike Rahmjoo

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 and 47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7- 8, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cosman (US Patent 6006126) in view of Nissen (US PAP 2003/ 0001869).

As per claims 1 and 47 Cosman teaches a selection unit (corresponding to physical coordinate detection system of fig. 12a) to select a reference point (corresponding to any points such as 920, 922, 926, or 928 of the skull) relative to the visualization of the three dimensional data set selected by the user (corresponding to the selection of the points on a visualization of the patient's head on an XYZ (i.e., 3D) coordinate system) see for example column 19 lines 40- 67 and fig. 12a. The perimeter 932 illustrate a 3D cube crosses said points;

a direction unit to specify a direction (corresponding to coordinate system XYZ of 12a) from said reference point to said point being selected by the user in the visualization corresponding to for example column 19 lines 40- 67 and fig. 12a wherein the coordinates are registered or known relative to the coordinate system (i.e., specifying the directions).

However, Cosman does not teach a distance unit to set a distance value from said reference point along said direction to said point to be selected by the visualization.

Nissen teaches a distance unit (i.e., image window tool of fig. 1) to set a distance value from said reference point along said direction to said point to be selected by the visualization (corresponding to for example determination of distance and direction from the reference point from the sensor point of which an input is read) see for example [0016].

It would have been made obvious to one of ordinary skilled in the art at the time the invention was made to incorporate the teachings of Nissen into Cosman so as to provide the reference points being visualized on the screen so that the user can visually see which point is being used for calculation of the resizing, therefore when one corner of the screen defines the reference point and as the user touches the screen in order to resize the object, the distance and direction between the touch point and this reference point is calculated for resizing and visualizing the resized object which adds to the efficiency and marketability of the device see for example [0020- 25].

As per claim 2 Cosman teaches the selection unit comprises a positioning unit to position the reference point on a two-dimensional surface (corresponding to points 834,836,838,840) and a sensor (detectors 800 and 798), the sensor registering a position of the point on the two-dimensional surface corresponding to for example fig. 9A wherein the detector system tracks the position of the probe and the probe tip and has a basis of data, e.g. "knows," when the probe touches these points.

As per claim 3 Cosman teaches wherein the selection unit comprises a mouse, a two-dimensional movement of the mouse (corresponding to the use of a mouse) registered by the mouse corresponding to a movement of the reference point on a surface corresponding to for example col. 17 lines 60- 65.

As per claim 4 Cosman teaches wherein the direction unit comprises a level tiltable (joystick and the tiltable level) in a direction and a sensor, the sensor registering a tilting of the level in the direction corresponding to for example col. 17 lines 60- 65.

As per claim 5 Cosman teaches wherein the direction unit comprises a joystick tiltable in two directions(joystick with inherent tilting) , tilting of the joystick unambiguously specifying two angles for direction specification corresponding to for example col. 17 lines 60- 65.

As per claim 7 Cosman teaches wherein the selection unit and the direction unit comprise a pointer wand whose position and orientation specify at least one of the reference point and the direction with respect to the visualization corresponding to for example col. 15 lines 60- 67 wherein the probe (unit 808) has a tip or position or virtual tip 814 which may touch off a point of an arbitrary nature 834 (corresponding to reference point).

As per claim 8 Cosman teaches wherein at least one of the position and orientation of the pointer wand is measurable by means of ultrasonic elapsed-time measurements corresponding to for example. Col. 26 lines 35- 40 wherein the ultrasonic probe may send out the ultrasonic signal, may receive the

reflected ultrasonic signal and determine a time delay between sending and receiving so as to determine the distance,

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified device of Cosman further in view of Taft (US Patent 6169537).

As per claim 6 the modified device of Cosman does not teaches the joystick is structurally connected with a mouse.

However, Taft teaches the joystick is structurally connected with a mouse corresponding to for example fig. 2a units 12 (joystick movable in XY directions) and 30 (conventional mouse).

It would have been made obvious to one of ordinary skilled in the art at the time the invention was made to incorporate the teachings Taft into Cosman to have a mouse assembled into joystick to partially overcome particular concern the awkward and unnatural hand position required to hold and control a computer mouse and therefore avoid great discomfort if a mouse is used for hours at a time and in extreme instances, serious hand and/or wrist injury, such as the infamous and debilitating carpal tunnel syndrome see col. 1 lines 30 – 40.

Claims 9- 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified device of Cosman further in view of Sekiguchi et al (US PAP 2002/ 060665).

As per claim 9 Cosman does not teach at least two ultrasonic transmitters, and the input system additionally comprises a receiving unit to receive ultrasonic signals and a synchronization unit to synchronize the ultrasonic transmitters and the receiving unit.

Sekiguchi teaches at least two ultrasonic transmitters, and the input system additionally comprises a receiving unit to receive ultrasonic signals and a synchronization unit (see for example claim 9 for the synchronization unit) to synchronize the ultrasonic transmitters and the receiving unit corresponding to for example [0144] wherein two ultrasonic transmitters may be attached to the receiving unit.

It would have been made obvious to one of ordinary skilled in the art at the time the invention was made to incorporate the teachings of Sekiguchi into Cosman to provide a coordinate input apparatus capable of making a coordinate input from a plurality of input planes and when the line connecting the two ultrasonic receivers is perpendicular to the input plane, the distances from the input device in the input plane to the two ultrasonic receivers exist in a plurality of sets and therefore the sufficiently practicable coordinate input device can be provided for precision and efficiency of the device see [0012].

As per claim 10 Sekiguchi teaches wherein the synchronization unit is connected by a radio connection with the ultrasonic transmitters of the pointer wand corresponding to for example [0144].

As per claim 11 Sekiguchi teaches at least two ultrasonic reflectors (corresponding to R1,R2 receiving the ultrasonic transmitted from the input unit 4), and the input system additionally comprises an ultrasonic transmitter, a receiving unit to receive ultrasonic signals, and a synchronization unit to synchronize an ultrasonic transmitter and a receiving unit corresponding to for example [0056]. Cosman also teaches light source in forms of various sources as reflectors see the abstract.

As per claim 12 Sekiguchi teaches wherein the ultrasonic reflectors are designed such that they reflect an ultrasonic pulse with at least one of different strength and with characteristic pulse form, depending on a frequency of the ultrasonic pulse corresponding to for example fig. 7 and the ultrasonic pulse form.

As per claim 13 Sekiguchi broadly teaches wherein the distance unit comprises a rotatable small wheel (corresponding to unit 17) and a sensor to detect rotation corresponding to for example fig. 4a.

As per claim 14 Sekiguchi broadly teaches wherein the input system also comprises a button to actuate a signal corresponding to for example personal computer 1 with on and off button.

As per claim 15 Sekiguchi an output unit to output a signal that comprises preferred information about at least one of the reference point, the direction and the distance value corresponding to for example claim 4 and the input and output coordinates or directions.



### ***Response to Arguments***

Applicant's arguments with respect to claims 1- 15 and 47 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's arguments on page 6 regarding the selection of a user, examiner point out to the selection unit (corresponding to physical coordinate detection system of fig. 12a) to select a reference point (corresponding to any points such as 920, 922, 926, or 928 of the skull) relative to the visualization of the three dimensional data set selected by the user (corresponding to the selection of the points on a visualization of the patient's head on an XYZ (i.e., 3D) coordinate system) see for example column 19 lines 40- 67 and fig. 12a. The perimeter 932 illustrate a 3D cube crosses said points.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### **Inquiry**

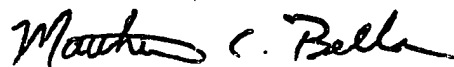
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is 571-272-7789. The examiner can normally be reached on 8 AM- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Rahmjoo

December 22, 2007



MATTHEW C. BELLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600